

We claim:

1. A method comprising:

at a key management facility:

- receiving an encryption key rekeying request from a non-roaming communication unit;
- communicating to the non-roaming communication unit a rekeying message that includes a rekeying encryption key, wherein at least a portion of the rekeying encryption key is encrypted using an encryption scheme that is decypherable by the non-roaming communication unit;
- receiving an encryption key rekeying request from a roaming communication unit;
- communicating to the roaming communication unit a rekeying message that includes a rekeying encryption key, wherein at least a portion of the rekeying encryption key is encrypted as a function of an encryption scheme that is decypherable by the roaming communication unit.

2. The method of claim 1 wherein receiving an encryption key rekeying request from a roaming communication unit includes receiving an encryption key rekeying request from a roaming wireless communication unit.

3. The method of claim 1 wherein receiving an encryption key rekeying request from a roaming communication unit includes receiving an encryption key rekeying request from a roaming communication unit via at least one intermediary communication system.

4. The method of claim 3 wherein communicating to the roaming communication unit a rekeying message that includes a rekeying encryption key, wherein at least a portion of the rekeying encryption key is encrypted as a function of an encryption scheme that is decypherable by the non-roaming communication unit includes communicating to the roaming communication unit a rekeying message that includes a rekeying encryption key, wherein at least a portion of the rekeying encryption key is encrypted as a function of an encryption scheme that is decypherable by the roaming communication unit and not readily decypherable by the at least one intermediary communication system.

5. The method of claim 1 and further comprising:

- receiving an acknowledgement message from the roaming communication unit to indicate successful reception of the rekeying message.

6. The method of claim 1 wherein communicating to the roaming communication unit a rekeying message includes:

- communicating to the roaming communication unit a first rekeying message;
 - receiving an acknowledgement message from the roaming communication unit in response to receiving the first rekeying message;
 - communicating to the roaming communication unit at least a second rekeying message;
- wherein at least one of the first and second rekeying message includes the rekeying encryption key.

7. The method of claim 1 wherein communicating to the roaming communication unit a rekeying message that includes a rekeying encryption key includes communicating to the roaming communication unit a rekeying message that includes a rekeying encryption key that comprises a home system encryption key for the key management facility, such that the roaming communication unit is provided with a home system encryption key as corresponds to the home communication system for the roaming communication unit as versus a unique roaming encryption key or an encryption key as is used by a communication system into which the roaming communication unit has roamed.

8. A key management facility comprising:

- at least one active home system encryption key;
 - a rekeying encryption key selector having a rekeying home system encryption key output;
 - a rekeying request processor that is operably coupled to the rekeying encryption key selector;
 - a wireless communication interface that is operably coupled to the at least one active home system encryption key and the rekeying request processor and wherein the wireless communication interface further couples to a wireless home communications system that supports wireless encrypted communications amongst authorized wireless non-roaming and roaming communication units using the at least one active home system encryption key;
- wherein the rekeying request processor provides substantially the same rekeying home system encryption key output, in substantially the same format, in response to a rekeying request from both a non-roaming and a roaming authorized communication units.

9. The key management facility of claim 8 and further comprising a plurality of active home system encryption keys.

10. The key management facility of claim 8 wherein the rekeying encryption key selector includes rekeying means for selecting a new active home system encryption key.

11. The key management facility of claim 10 wherein the rekeying means selects the new active home system encryption key as a function, at least in part, of a temporal schedule.

12. The key management facility of claim 8 wherein the wireless communication interface includes encryption means for encrypting rekeying information to be transmitted to either of a roaming and a non-roaming communication unit using an encryption key that is likely possessed by a receiving authorized roaming and non-roaming communication unit but that is not likely possessed by an intermediary communication system node.

13. The key management facility of claim 12 wherein the intermediary communication system node includes another encryption management facility.

14. A method for rekeying wireless communication units that share a home key management facility, comprising:

at a roaming communication unit:

- transmitting via a second key management facility a rekeying request to the home key management facility;

at the home key management facility:

- receiving the rekeying request;
- preparing a rekeying message, which rekeying message includes at least a rekeying encryption key, and which rekeying message is at least partially encrypted using an encryption key that is possessed by the roaming communication unit and not by the second key management facility;
- transmitting at least a portion of the rekeying message to the roaming communication unit via the second key management facility;

at the roaming communication unit:

- receiving the rekeying message as transmitted by the home key management facility;
- decrypting the rekeying message using the encryption key.

15. The method of claim 14 and further comprising, at the roaming communication unit, transmitting a rekeying message reception acknowledgement message via a communication system that includes the second key management facility to the home key management facility.

16. The method of claim 15 and further comprising, at the home key management facility, receiving the rekeying message reception acknowledgement.

17. The method of claim 16 and further comprising, at the home key management facility, transmitting additional rekeying information to the roaming communication unit via the communication system that includes the second key management facility.